20040304.ba v03_n614.bam.20040304

>From ???@??? Thu Mar 4 13:01:03 2004 -0600
Message-Id: <200403041900.i24J0Tvx023439@sco.theporch.com>
Date: Thu, 4 Mar 2004 13:00:06 CST
From: Old Tube Radios <boatanchors@theporch.com>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: BOATANCHORS digest 3614

BOATANCHORS Digest 3614

Topics covered in this issue include:

1) SS rectifier replacements
by "Nick England" <nick@3rdtech.com>
2) Re: 6X5 THREAD
by John Shriver <jshriver@internap.com>
3) Re: SS rectifier replacements
by John Shriver <jshriver@internap.com>
4) Re: 6X5 THREAD
by WA5CAB@cs.com
5) Speaking of audio snake oil...
by charlesmorris@direcway.com
6) SS rectifier replacements
by Rhett George <rtg@ee.duke.edu>
7) Re: SS rectifier replacements
by WA5CAB@cs.com
8) Re: Speaking of audio snake oil...
by "Nick England" <nick@3rdtech.com>
9) Re: 6X5 THREAD
by Bob Roehrig <broehrig@aurora.edu>
10) Re: Speaking of audio snake oil...
by Bob Roehrig <broehrig@aurora.edu>
11) Re: Speaking of audio snake oil...
by WA5CAB@cs.com
12) Re: 6X5 THREAD
by "Arden Allen" <gumbear@pacbell.net>
13) Re: 6X5 THREAD
by "Arden Allen" <gumbear@pacbell.net>
14) Re: 6X5 THREAD
by "Arden Allen" <gumbear@pacbell.net>
15) Re: SS rectifier replacements
by "Arden Allen" <gumbear@pacbell.net>
16) Re: Speaking of audio snake oil...
by Tom Norris <r390a@bellsouth.net>
17) Re: Speaking of audio snake oil...
by "Charles W3KC" <w3kc@starpower.net>
18) Re: Speaking of audio snake oil...

by Avery Comarow <acomarow@usnews.com>
19) Re: Speaking of audio snake oil...
by "Grant Youngman" <nq5t@comcast.net>
20) Re: SS rectifier replacements
by "Nick England" <nick@3rdtech.com>

Message-ID: <025501c40207$4dd2be20$fd0212ac@3rdtech.com>
From: "Nick England" <nick@3rdtech.com>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: SS rectifier replacements
Date: Thu, 4 Mar 2004 11:39:46 -0500
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Something that has been lurking in my head for a while got triggered by John Sehring's recent comments in the 6X5 discussion - replacing tube and selenium rectifiers with silicon diodes. Conventional advice is to stick a resistor in series to simulate the old rectifier's voltage drop. However it seems to me this has two problems
1 - it isn't correct except at a given current (as John pointed out)
2 - you are increasing the rectifier source impedance

Selenium replacement commonly comes up in bias supplies (particularly for tube audio gear) - the current drain is often so low I'd have to stick 68K or something like that in series to get the right voltage drop. Am I wrong to feel uncomfortable about increasing the source impedance so much? On the other hand, I guess if there isn't much average current, there isn't much need to replenish the filter cap quickly (principal effect of high rectifier impedance?).

Wouldn't a better policy be to use a zener diode in series to get a fixed voltage drop without increased source impedance? Any down side to this?
Hmm, maybe I can repackage zeners and sell them at insane prices to "preserve that original selenium bias rectifier sound".

73 & Have Fun,
Nick KD4CPL

Message-ID: <40475B3B.2050205@internap.com>
Date: Thu, 04 Mar 2004 11:37:15 -0500
From: John Shriver <jshriver@internap.com>
MIME-Version: 1.0
CC: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: 6X5 THREAD
Content-Type: text/plain; charset=ISO-8859-1; format=flowed

Content-Transfer-Encoding: 7bit
To: Old Tube Radios <boatanchors@theporch.com>

Another reason to correct the B+ voltage when switching from tube to SS rectification is that sometimes the circuit behaves quite differently with higher B+ voltage. I've read that the trusty Dynaco FM-3 FM stereo tuner gets too much IF gain when you SS the rectifier, pushing it over the edge of oscillation. This isn't a stagger-tuned strip, it's just peaked at 10.7 MHz, and has a lot of gain, to have a lot of limiting. Not a lot of shielding, other than on the tubes.

I've had some trouble with the IF singing on mine when aligning it with the toob rectifier in place. (Higher line voltage then when it was designed?) You really don't want to see anything coming out of the IF strip when you have removed the LO tube, or ground the grid on the LO, to disable the LO. I think I've always had to have the IF frequency a little off 10.7 MHz so it won't sing on me. I can still make the dial track.

Nice tuner, but runs hot enough that the sockets wear out, the RF amp tube is short-lived, and the tuning eye tube is scarce as hell.

Message-ID: <40476431.8050702@internap.com>
Date: Thu, 04 Mar 2004 12:15:29 -0500
From: John Shriver <jshriver@internap.com>
MIME-Version: 1.0
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: SS rectifier replacements
Content-Type: text/plain; charset=ISO-8859-1; format=flowed
Content-Transfer-Encoding: 7bit

I suppose the downside of burning off the voltage somewhere after the diode to get back down to the tube-rectified voltage is that it's going to generate as much heat as the tube (except for the heater power). Not a problem in micro-current bias supplies, but a potential issue for the real B+ supply. This why I do like the idea of using the rectifier filement winding to buck down. (Unforuntately, there isn't one if the toob is a 6X4...)

But, using a zener could make the bias stiffer than it used to be. This might change the behavior of the device under overload. Good designers were careful about the relative stiffness of the B+ and C- supplies, and how they reacted to power supply loading. Get it wrong, and the device could runaway under overload. Although I think stiffening the bias would just increase distortion as the B+ sags.

Nick England wrote:

>Wouldn't a better policy be to use a zener diode in series to get a fixed
>voltage drop without increased source impedance? Any down side to this?
>
>73 & Have Fun,
>Nick KD4CPL
>
>
>
>

From: WA5CAB@cs.com
Message-ID: <da.4d910b7.2d78be92@cs.com>
Date: Thu, 4 Mar 2004 12:17:06 EST
Subject: Re: 6X5 THREAD
To: Old Tube Radios <boatanchors@theporch.com>
MIME-Version: 1.0
Content-Type: multipart/alternative; boundary="part1_da.4d910b7.2d78be92_boundary"

--part1_da.4d910b7.2d78be92_boundary
Content-Type: text/plain; charset="US-ASCII"
Content-Transfer-Encoding: 7bit

Chuck & Group,

Using another winding on a transformer to buck or boost the output voltages certainly works and doesn't seem to get mentioned much anymore. However, if I correctly recall the type of set that started this thread, seems like the complaint was penny-pinching in the transformer department by using 6.3 volt indirectly heated cathode rectifier tubes to eliminate the 5.2 VAC rectifier heater
winding, running all of the tubes in the set off of one 6.3 V winding. In this case, connecting it to the primary might well be disastrous. Plus boosting the advertising tube count by one. :-) If however they used a pair of 6X5GT's and gave them their own heater winding, then it would be just as you say. Work a little better in fact.

In a message dated 3/4/2004 10:33:55 AM Central Standard Time, n5cm@rtconline.com writes:
> Don't overlook an easy way to lower the voltage somewhat by
> using the "now unused rectifier filament winding" on the power
> tranformer....
> By connecting this winding in "series adding" with the transformer
> primary winding you lower the "turns ratio" which lowers the
> output voltage....
> Connect the filament winding in series with the primary winding

> and check voltage output from power supply - if voltage is
> higher than it was originally, reverse the two filament leads
> and reconnect....This will lower the voltage output.... A
> seeming little known but easy way to cut down on the output
> voltage....
> Good luck!
>

73
Robert Downs - Houston
<http://www.wa5cab.com> (Web Store)
<wa5cab@cs.com> (Primary email)
<wa5cab@houston.rr.com> (Backup email)

--part1_da.4d910b7.2d78be92_boundary
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

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* * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*         ---REMAINDER OF MESSAGE TRUNCATED---             *
*     This post contains a forbidden message format        *
*  (such as an attached file, a v-card, HTML formatting)  *
*    Mail Lists at theporch.com only accept PLAIN TEXT     *
* If your postings display this message your mail program *
* is not set to send PLAIN TEXT ONLY and needs adjusting  *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
```

--part1_da.4d910b7.2d78be92_boundary--

Date: Thu, 04 Mar 2004 11:28:09 -0600
From: charlesmorris@direcway.com
Subject: Speaking of audio snake oil...
To: Old Tube Radios <boatanchors@theporch.com>
Message-id: <5035f05071e7.5071e75035f0@direcway.com>
MIME-version: 1.0
Content-type: text/plain; charset=us-ascii
Content-language: en
Content-transfer-encoding: 7BIT
Content-disposition: inline

You may have seen this before, but this one really tripped my BS detector. I assume this is for real and her name is not intended to be humorous? And to think my ARC-5's could be sounding "meaty and chesty" just by adding a few caps!
-Charles

>Everyone, without exception, loves the sound with Auricaps in the gear. The highs are smooth and >clear without tizzyness or hash or dulling roll off. The Mids are

meaty and full of emotion when the >source offers it. 'Three D' sound staging should be Auricaps middle name. Bass is tight and well >connected, chesty and textured with power and authority. Best of all is not that these separate >frequency groups sound so good as separate elements, but that they sound so "together" and "as one >whole" when music plays through them. I sense no loss of rhythm, pacing, or emotion in circuits that >employ these parts.
>Jennifer WhiteWolf-Crock
>Owner: JENA LABS

Date: Thu, 4 Mar 2004 12:35:44 -0500
From: Rhett George <rtg@ee.duke.edu>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: SS rectifier replacements
Message-ID: <20040304173544.GF29300@ee.duke.edu>
Mime-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Disposition: inline

 - Greetings -

A fine idea from Nick to add properly heat-sinked zener diodes for the necessary forward voltage drop. How about putting high-current-limit red LED's in series with the zeners and get a non-destructive warm glow from the rectifier?

73   Rhett - KE4HIH

From: WA5CAB@cs.com
Message-ID: <26.45ac0ab8.2d78c464@cs.com>
Date: Thu, 4 Mar 2004 12:41:56 EST
Subject: Re: SS rectifier replacements
To: Old Tube Radios <boatanchors@theporch.com>
MIME-Version: 1.0
Content-Type: multipart/alternative;
boundary="part1_26.45ac0ab8.2d78c464_boundary"

--part1_26.45ac0ab8.2d78c464_boundary
Content-Type: text/plain; charset="US-ASCII"
Content-Transfer-Encoding: 7bit

Nick & Group,

It's a little more complicated than that. First, impedance is impedance. Forward voltage drop in vacuum, gas, selenium, iron oxide, germanium and silicon rectifiers is at least in part due to the fact that they all have an equivalent resistance in the forward direction. There may be (or is) also a fixed (voltage) forward drop due to the nature of the rectifier. So if you take a 6X5GT for example, measure its forward drop at the normal operating point, calculate the equivalent resistance and substitute a resistor of that value plus a silicon diode, you will have closely simulated the 6X5GT, including its equivalent source impedance at least at that load. If you use instead a zener diode, (1) the heat load will remain the same except for the elimination of the tube heater and (2) the source impedance will be considerable different than it was originally. Whether either of those would matter is another matter. :-)

In a message dated 3/4/2004 10:37:52 AM Central Standard Time,
nick@3rdtech.com writes:

> Wouldn't a better policy be to use a zener diode in series to get a fixed
> voltage drop without increased source impedance? Any down side to this?
> Hmm, maybe I can repackage zeners and sell them at insane prices to
> "preserve
> that original selenium bias rectifier sound".

73
Robert Downs - Houston
<http://www.wa5cab.com> (Web Store)
<wa5cab@cs.com> (Primary email)
<wa5cab@houston.rr.com> (Backup email)

--part1_26.45ac0ab8.2d78c464_boundary
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

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* * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*         ---REMAINDER OF MESSAGE TRUNCATED---             *
*     This post contains a forbidden message format        *
*  (such as an attached file, a v-card, HTML formatting)   *
*    Mail Lists at theporch.com only accept PLAIN TEXT     *
* If your postings display this message your mail program  *
* is not set to send PLAIN TEXT ONLY and needs adjusting   *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
```

--part1_26.45ac0ab8.2d78c464_boundary--

Message-ID: <02a201c40210$93873320$fd0212ac@3rdtech.com>
From: "Nick England" <nick@3rdtech.com>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Speaking of audio snake oil...
Date: Thu, 4 Mar 2004 12:46:08 -0500
MIME-Version: 1.0
Content-Type: text/plain;

charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Yep, it's the potential "loss of rhythm, pacing, or emotion in the circuits" that led me to put new caps in my Johnson Valiant. Now the RF output is quite cheerful and the chassis taps one rubber foot in perfect time to the music of the ether.
best regards,
Nick KD4CPL
----- Original Message -----
From: <charlesmorris@direcway.com>
To: "Old Tube Radios" <boatanchors@theporch.com>
Sent: Thursday, March 04, 2004 12:28 PM
Subject: Speaking of audio snake oil...

> You may have seen this before, but this one really tripped my BS detector.

Date: Thu, 4 Mar 2004 11:44:12 -0600 (CST)
From: Bob Roehrig <broehrig@aurora.edu>
To: Old Tube Radios <boatanchors@theporch.com>
cc: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: 6X5 THREAD
Message-ID: <Pine.OSF.4.58.0403041141220.6049@mail.aurora.edu>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

On Thu, 4 Mar 2004 JOHN.SEHRING@ecunet.org wrote:

> Continuing the 6X5 thread... If you sub ss diodes for vacuum's, add a series resistor to get the B+ back to where it was with the original tube rectifier. I recall(?) that a tube rect has a non-linear resistance (& so, voltage drop) characteristic, so you probably won't be able to get *exactly* the right R for all the possible current loads, but close enuf for gov't work, as we used to say in the service.

The other thing to watch for is that with the SS diodes, you have instant B+ when you turn it on so you will have the peak DC voltage which, in some marginally designed sets, can exceed the voltage rating of some caps.

This higher - than - neormal B+ will remain until the tubes are hot enough to draw their normal current.

Bob Roehrig
Aurora University Telecom/IS dept.
broehrig@aurora.edu   73 de K9EUI
630-844-4898   fax 630-844-4222

Date: Thu, 4 Mar 2004 11:52:42 -0600 (CST)
From: Bob Roehrig <broehrig@aurora.edu>
To: Old Tube Radios <boatanchors@theporch.com>
cc: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Speaking of audio snake oil...
Message-ID: <Pine.OSF.4.58.0403041149310.6049@mail.aurora.edu>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

On Thu, 4 Mar 2004 charlesmorris@direcway.com wrote:

> >The highs are smooth and clear without tizzyness or hash or dulling
> >roll off. The Mids are meaty and full of emotion when the source offers
> >it. Bass is tight and well connected, chesty and textured with power
> >and authority. I sense no loss of rhythm, pacing, or emotion

I think the people that write this cr*p are the same ones that write the descriptions on wine bottles.

But I am glad to finally find out my 2 meter H-T suffers from "tizzyness"
:-)

Bob Roehrig
Aurora University Telecom/IS dept.
broehrig@aurora.edu   73 de K9EUI
630-844-4898   fax 630-844-4222

From: WA5CAB@cs.com
Message-ID: <158.2f195b37.2d78cc0a@cs.com>
Date: Thu, 4 Mar 2004 13:14:34 EST
Subject: Re: Speaking of audio snake oil...
To: Old Tube Radios <boatanchors@theporch.com>
CC: boatanchors@theporch.com
MIME-Version: 1.0
Content-Type: multipart/alternative;
boundary="part1_158.2f195b37.2d78cc0a_boundary"

--part1_158.2f195b37.2d78cc0a_boundary
Content-Type: text/plain; charset="US-ASCII"
Content-Transfer-Encoding: 7bit

Bob,

Yeah, and for Japanese cars. I don't think my radios suffer from "tizzyness"

```
but being all military, they should be emotionless but well paced and well
connected, right?  :-)

In a message dated 3/4/2004 11:54:00 AM Central Standard Time,
broehrig@aurora.edu writes:
> >>The highs are smooth and clear without tizzyness or hash or dulling
> >>roll off. The Mids are meaty and full of emotion when the source offers
> >>it. Bass is tight and well connected, chesty and textured with power
> >>and authority. I sense no loss of rhythm, pacing, or emotion
>
> I think the people that write this cr*p are the same ones that write the
> descriptions on wine bottles.
>
> But I am glad to finally find out my 2 meter H-T suffers from "tizzyness"
>

Robert Downs - Houston
<http://www.wa5cab.com> (Web Store)
<wa5cab@cs.com> (Primary email)
<wa5cab@houston.rr.com> (Backup email)

--part1_158.2f195b37.2d78cc0a_boundary
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

* * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*         ---REMAINDER OF MESSAGE TRUNCATED---            *
*     This post contains a forbidden message format       *
*  (such as an attached file, a v-card, HTML formatting)  *
*    Mail Lists at theporch.com only accept PLAIN TEXT    *
* If your postings display this message your mail program *
* is not set to send PLAIN TEXT ONLY and needs adjusting  *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

--part1_158.2f195b37.2d78cc0a_boundary--

------------------------------
Message-ID: <004a01c40215$66596580$6ae57443@KB6NAX>
From: "Arden Allen" <gumbear@pacbell.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: 6X5 THREAD
Date: Thu, 4 Mar 2004 09:47:32 -0800
MIME-Version: 1.0
Content-Type: text/plain;
     charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

> .......I've read that the trusty Dynaco FM-3 FM stereo
```

> tuner gets too much IF gain when you SS the rectifier, pushing it over
> the edge of oscillation. ....

FM-3 alignment should be right down the alley of any two-thumbed ham. The IF strip employs a *neutraizing stump* to stabilize the amp. Some folks remove it thinking it's just' a piece of wire sticking up for no good reason. If your FM-3 oscillates try increasing the stump's length an eighth of and inch or tilting it a little this way or that. Best to sweep align the IF with a 10.7MHz marker at the center to get it right. When aligned correctly the FM-3's perform beautifully.

Arden Allen
KB6NAX

Message-ID: <004b01c40215$66e2e0d0$6ae57443@KB6NAX>
From: "Arden Allen" <gumbear@pacbell.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: 6X5 THREAD
Date: Thu, 4 Mar 2004 09:47:42 -0800
MIME-Version: 1.0
Content-Type: text/plain;
     charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Ken sez:

> Don't overlook an easy way to lower the voltage somewhat by
> using the "now unused rectifier filament winding" on the power
> tranformer....

Kind of hard to do when the 6.3 volt filament winding is used to power other tubes as well which is often the case with things like VFO's, preamps and tuners.

And don't forget the "no free lunch" theorem. Power in = power out. Either the heat comes from the resistor you added to lower B+ to its orignal value or it comes out of here and there because of the added B+. At 0.6A x 6.3V = 3.78W it hardly seems worth replacing the tube with silicon diodes.

One thing to consider is what the filter capacitor voltage swells to before the tubes heat up and draw the B+ down to normal operating value.

Arden Allen
KB6NAX

Message-ID: <004c01c40215$67633460$6ae57443@KB6NAX>

```
From: "Arden Allen" <gumbear@pacbell.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: 6X5 THREAD
Date: Thu, 4 Mar 2004 09:47:50 -0800
MIME-Version: 1.0
Content-Type: text/plain;
     charset="Windows-1252"
Content-Transfer-Encoding: 7bit
```

John sez:

> Continuing the 6X5 thread... If you sub ss diodes for vacuum's, add a
> series resistor to get the B+ back to where it was ....

And I sez back to square one. The original complaint was that 6X5's and their like short and cause the high voltage winding to open. Not that silicon diodes are 100% free of shorting but it still takes a FUSE to protect the power transformer.

Arden Allen
KB6NAX

```
Message-ID: <004d01c40215$67e3af00$6ae57443@KB6NAX>
From: "Arden Allen" <gumbear@pacbell.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: SS rectifier replacements
Date: Thu, 4 Mar 2004 10:20:36 -0800
MIME-Version: 1.0
Content-Type: text/plain;
     charset="iso-8859-1"
Content-Transfer-Encoding: 7bit
```

Nick says that replacing seleniums with silicons and a series resistor causes the following maladies:

> 1 - it [the voltage] isn't correct except at a given current (as John
pointed out)
> 2 - you are increasing the rectifier source impedance

Regarding comment (1), the difference is so slight that if any piece of gear suffers from the effect it's a piece of junk, IMO. Line voltage fluctuations would be a problem with such equipment.

As for comment (2), assuming in all cases that a selenium diode of equivalent rating outperforms a silicon diode with respect to foreward barrier potential and bulk resistance, all this becomes moot when you consider the transformer's secondary winding resistance which (surpise!) is in series with the rectifiers. That is the main source of power supply impedance!

The main reason for replacing selenium with silicon is because of the wear-out and cost problems with selenium compared to silicon.

In EVERY (100+) case where I replaced selenium diodes with silicon diodes in amplifier bias supplies the supply voltage INCREASED to a value higher than what was supplied with the selenium rectifier when it was new! Not always a bad thing when you consider the melt-down problems with 7591A's because manufacturer's ran them too hard (too high Iq) before they learned their lesson (too late anyway as solid state swept in).

Arden Allen
KB6NAX

Mime-Version: 1.0
Message-Id: <p06020442bc6d2135f3da@[10.0.1.2]>
Date: Thu, 4 Mar 2004 12:14:46 -0600
To: Old Tube Radios <boatanchors@theporch.com>
From: Tom Norris <r390a@bellsouth.net>
Subject: Re: Speaking of audio snake oil...
Content-Type: text/plain; charset="us-ascii" ; format="flowed"

Hmmm, wonder if those caps are "Cryo Treated"? Seems to be the "in" thing the past couple years, especially *cryo treated tubes* Yes, there is some belief that dipping tubes or cables in LN2 will somehow magically alter them and make them somehow sonic-ly (not a read word) superior. sigh.

On the caps, seems if you used the right values *anyway* the gear would sound OK....

Don't forget when rebuilding Command Sets to always use oxygen free wiring! And be sure to "break in" your cables before use! (Yes, there are companies that offer cable break in service!!! Supposedly this special $100 a foot wire is supposed to be broken in before use, and just using it to connect to your speakers does not produce enough voltage to properly align the molecular structure of the wiring. Oh, and most of the expensive wiring is advertised as being unidirectional too! *puts head in hands*

>You may have seen this before, but this one really tripped my BS
>detector. I assume this is for real and her name is not intended to
>be humorous? And to think my ARC-5's could be sounding "meaty and
>chesty" just by adding a few caps!
>-Charles
>
>>Everyone, without exception, loves the sound with Auricaps in the

```
>>gear. The highs are smooth and >clear without tizzyness or hash or
>>dulling roll off. The Mids are meaty and full of emotion when
>>the >source offers it. 'Three D' sound staging should be Auricaps
>>middle name. Bass is tight and well >connected, chesty and textured
>>with power and authority. Best of all is not that these
>>separate >frequency groups sound so good as separate elements, but
>>that they sound so "together" and "as one >whole" when music plays
>>through them. I sense no loss of rhythm, pacing, or emotion in
>>circuits that >employ these parts.
>>Jennifer WhiteWolf-Crock
>>Owner: JENA LABS

------------------------------
Message-ID: <001a01c40217$1c4b0b40$62002c42@w3kc>
From: "Charles W3KC" <w3kc@starpower.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Speaking of audio snake oil...
Date: Thu, 4 Mar 2004 13:32:53 -0500

At least the "Crock" part is right!
73 Chas W3KC

------------------------------
Message-Id: <6.0.1.1.2.20040304133421.02838a60@ntpop.usnews.com>
Date: Thu, 04 Mar 2004 13:39:25 -0500
To: Old Tube Radios <boatanchors@theporch.com>
From: Avery Comarow <acomarow@usnews.com>
Subject: Re: Speaking of audio snake oil...
Cc: boatanchors@theporch.com
Mime-Version: 1.0
Content-Type: multipart/alternative;
     boundary="=====================_5920963==.ALT"

--=====================_5920963==.ALT
Content-Type: text/plain; charset="us-ascii"; format=flowed

All this stuff strikes me as the audiophile equivalent of homeopathy (hey,
it works--so what if there's not a single molecule of the curative
substance in the potion ingested?) and medicine's placebo effect.

Avery W3AVE
Potomac, Md.
(medical writer)

At 01:14 PM 3/4/04, you wrote:
>Hmmm, wonder if those caps are "Cryo Treated"? Seems to be the "in" thing
>the past couple years, especially *cryo treated tubes* Yes, there is some
>belief that dipping tubes or cables in LN2 will somehow magically alter them
```

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>and make them somehow sonic-ly (not a read word) superior. sigh.
>
>On the caps, seems if you used the right values *anyway* the gear
>would sound OK....
>
>Don't forget when rebuilding Command Sets to always use oxygen free
>wiring! And be sure to "break in" your cables before use! (Yes, there are
>companies that offer cable break in service!!! Supposedly this special
>$100 a foot wire is supposed to be broken in before use, and just using
>it to connect to your speakers does not produce enough voltage to properly
>align the molecular structure of the wiring. Oh, and most of the expensive
>wiring is advertised as being unidirectional too! *puts head in hands*
>
>>You may have seen this before, but this one really tripped my BS
>>detector. I assume this is for real and her name is not intended to be
>>humorous? And to think my ARC-5's could be sounding "meaty and chesty"
>>just by adding a few caps!
>>-Charles
>>
>>>Everyone, without exception, loves the sound with Auricaps in the gear.
>>>The highs are smooth and >clear without tizzyness or hash or dulling
>>>roll off. The Mids are meaty and full of emotion when the >source offers
>>>it. 'Three D' sound staging should be Auricaps middle name. Bass is
>>>tight and well >connected, chesty and textured with power and authority.
>>>Best of all is not that these separate >frequency groups sound so good
>>>as separate elements, but that they sound so "together" and "as
>>>one >whole" when music plays through them. I sense no loss of rhythm,
>>>pacing, or emotion in circuits that >employ these parts.
>>>Jennifer WhiteWolf-Crock
>>>Owner: JENA LABS

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Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

* * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*         ---REMAINDER OF MESSAGE TRUNCATED---            *
*     This post contains a forbidden message format       *
*  (such as an attached file, a v-card, HTML formatting)  *
*    Mail Lists at theporch.com only accept PLAIN TEXT    *
* If your postings display this message your mail program *
* is not set to send PLAIN TEXT ONLY and needs adjusting  *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

--====================_5920963==.ALT--

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From: "Grant Youngman" <nq5t@comcast.net>
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To: Old Tube Radios <boatanchors@theporch.com>
Date: Thu, 4 Mar 2004 12:55:08 -0600
MIME-Version: 1.0
Content-type: text/plain; charset=US-ASCII
Content-transfer-encoding: 7BIT
Subject: Re: Speaking of audio snake oil...
Message-ID: <4047272C.1394.E77D3EF@localhost>

> > >>The highs are smooth and clear without tizzyness or hash or dulling
> > >>roll off. The Mids are meaty and full of emotion when the source offers
> > >>it. Bass is tight and well connected, chesty and textured with power
> > >>and authority. I sense no loss of rhythm, pacing, or emotion

... But ...

They may not be the best for "vintage" restorations. One site says:

"The IC-MWR sonics are very close to the original designers intentions for the equipment. We have noted that certain high priced film caps tend to dry the sound out and even make certain vintage equipment unlistenable"

So you might want to avoid "chesty" bass and the emotion and go for the cheaper stuff. Who want's a dry sounding SP-600? Heaven forbid ... :-)

Grant/NQ5T

Message-ID: <034d01c4021b$697f4ee0$fd0212ac@3rdtech.com>
From: "Nick England" <nick@3rdtech.com>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: SS rectifier replacements
Date: Thu, 4 Mar 2004 14:03:42 -0500
MIME-Version: 1.0
Content-Type: text/plain;
     charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Thanks Arden, et al. -

I guess I was mainly thinking about times where I'd replaced the selenium bias rectifier with silicon and of course seen the bias increase substantially - Don't seleniums have a fairly large semi-constant forward voltage drop (5-10v or so)? I'm going on dim memories of experience and seeing an old IR data sheet.

As I said, in some cases it would take 68K or so in series to bring the bias back down to spec. I see replacement recommendations saying use 100-150 ohms in series - that doesn't have very much effect with 1 mA bias circuit current does it?

Clearly 68K far outweighs any winding resistance or rectifier bulk resistance, right? - so I just felt "uneasy" about such a large source impedance. I don't really know why - logic tells me that the bias supply is low current - I wouldn't feel "uneasy" about having a supply at twice the voltage and using a 68K/68K voltage divider to feed a 1M load, now would I?

Yep, you can toast marshmallows with most 7591A amps - for a while.

cheers,
Nick

End of BOATANCHORS Digest 3614
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